MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
Jennifer Granholm, Governor • Steven Chester, Director

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DEQ ENVIRONMENTAL RESPONSE DIVISION
INFORMATION BULLETIN

VILLAGE OF DOUGLAS GROUNDWATER CONTAMINATION
Douglas, Allegan County
May 2004

INTRODUCTION

The purpose of this bulletin is to inform area residents of environmental response actions being conducted in the Village of Douglas by the Remediation and Redevelopment Division of the Michigan Department of Environmental Quality (DEQ). This bulletin includes a summary of DEQ remedial investigations that were conducted to define the source and extent of contamination, as well as, a map to illustrate the extent of groundwater contamination.

To help clarify issues or address questions that you may have on any aspect of this investigation, please refer to the list of DEQ staff contacts provided at the end of this bulletin.

RECENT REPORTS

A more detailed account of work activities conducted by the DEQ at this site in 2003 is provided in a new report entitled: "Remedial Investigation Report, Village of Douglas." This document and earlier reports can be viewed at the Saugatuck-Douglas District Library.

In addition, the Michigan Department of Community Health (DCH) prepared a Health Consultation report in 2003 regarding the contamination on and under the former Miro Golf Course, located southwest of Ferry and Center streets. A Health Consultation evaluates environmental data and community information to determine what kind of public health hazard, if any, exists at a contaminated site. In this case the health hazard to current and future users of the golf course property cannot be determined at this time. DCH will review new data as it becomes available so a definitive health call can be made. A copy of the report is available at the Douglas Village Offices, the Saugatuck-Douglas District Library, or from DCH staff listed at the end of this bulletin.

PUBLIC MEETING

With completion of the remedial investigation in December 2003, the DEQ is now evaluating potential cleanup alternatives. The DEQ currently anticipates that a public information meeting will be held in the Village of Douglas in late fall 2004. The purpose of the meeting will be to present those findings along with the DEQ's recommendation for a proposed cleanup remedy, and to receive and respond to questions community residents may have.

DRINKING WATER SUPPLY

Drinking water for homes and businesses in the affected area of groundwater contamination in the Village of Douglas (see description below) is supplied by the Kalamazoo Lake Sewer and Water Authority (Authority) with groundwater serving as its water source. Regular sample collection and analysis by the Authority of the municipal water supply indicates all state and federal drinking water quality standards are being met. No known individual private residential wells lie in the defined area of contamination.

SITE LOCATION AND HISTORY

Location/ownership: The defined area of contamination at the Village of Douglas site extends from the former Chase Manufacturing Corporation (Chase) property located north of the intersection of Ferry Street and Blue Star Highway and continues north to Wick's Creek and Kalamazoo Lake.

Haworth did not cause the contamination; however Haworth is obligated, as required by state law, to exercise due care actions, such as preventing unacceptable exposures to existing contamination.
Contamination: In March 1986, routine sample collection and analysis detected the presence of

halogenated volatile organic compounds (HVOCs), including but not limited to, trichloroethylene (TCE), an industrial solvent, in one of two municipal water supply wells in the Village of Douglas. The contaminated municipal well contains HVOCs at concentrations in excess of Residential Health Based Drinking Water Criteria. A municipal water filtration plant was constructed to remove iron. As a result of the filtration, concentrations of HVOCs in the municipal water supply are reduced to acceptable state and federal drinking water quality standards.

Subsequent investigations determined that industrial operations and associated waste disposal to the ground and lagoons by Chase resulted in HVOC contamination in soil and groundwater. The primary HVOC contaminant of concern is TCE, which was detected at a maximum concentration of 16,000 part per billion (ppb) in groundwater. The state's Residential Drinking Water Criteria is 5 ppb. The HVOC contamination migrates north through groundwater from the former Chase property to Wick's Creek and Kalamazoo Lake.

REMEDIAL INVESTIGATION FINDINGS

In 2003, the DEQ and its' contractor, Weston Solutions, Inc., conducted another remedial investigation at the Village of Douglas site. This investigation included historical documentation review, field investigations, and interpretation of all analytical data. This investigation separated the site into three sampling areas. Findings follow:

1) Wick's Creek Area: Location: on the West Shore Golf Course, northwest of Ferry and Center Streets. Sampling: Eight soil boring locations, six vertical aquifer groundwater sample locations, and four groundwater monitoring well sample locations. Findings: TCE present at maximum concentrations of 1,600 ppb in *surface* water in Wick's Creek, in excess of state surface water criteria of 200 ppb.

2) Groundwater Plume Investigation Area: Location: on the former Miro Golf Course property, southwest of Ferry and Center Streets, AND on the West Shore Golf Course, west of Ferry Street but east of the Wick's Creek Area. Sampling: Eight vertical aquifer groundwater sample locations and six groundwater monitoring well sample locations. Findings: TCE present at maximum concentrations of 23,000 ppb in groundwater, in excess of state criteria drinking water criteria of 5 ppb. Groundwater flow direction in the aquifer is to the northwest. A limited area of groundwater perched above a shallow clay layer (groundwater not in an aquifer) was identified beneath a portion of the former Chase property and has been shown to migrate to the east.

3) Source Investigation Area: Location: on the former Chase property, east of Ferry Street and west of Blue Star Highway. Sampling: Eight soil boring locations and four groundwater monitoring sample well locations. Findings: TCE is present at maximum concentrations of 600 ppb in soil on the former Chase property, in excess of state soil protective of drinking water criteria of 100 ppb.

The 2003 investigation also included the collection and analysis of 13 surface water samples collected from Wick's Creek, Kalamazoo Lake, and various ponds located in the contamination area. Surface water and groundwater elevation data was measured to determine surface water and groundwater gradients and flow direction.

FUTURE DEQ ACTIONS

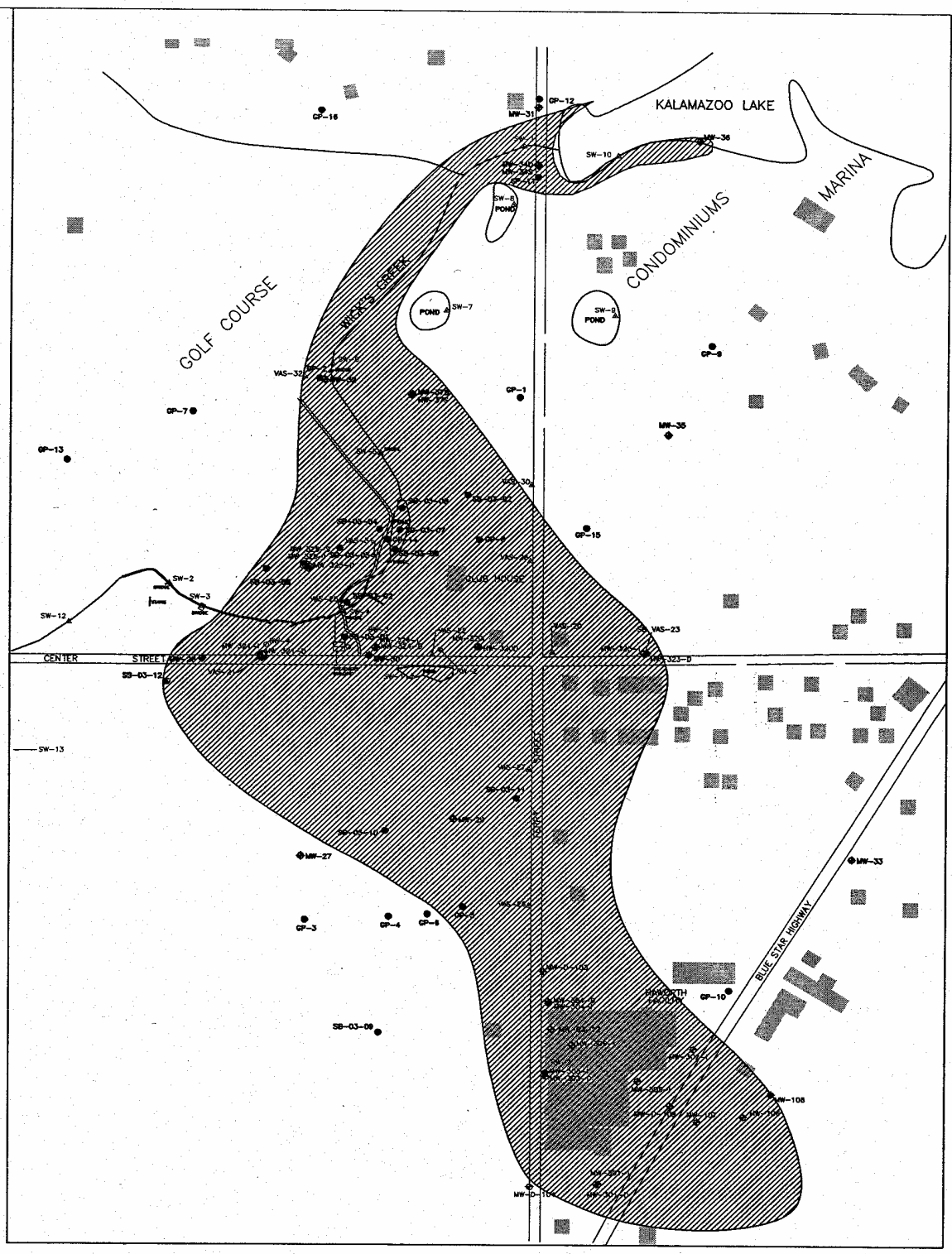
With completion of the remedial investigation in December 2003, the DEQ expects a cleanup remedy for the contamination will be selected in 2004, with construction of the remedy to begin during the late fall. Once construction is complete, the DEQ plans to operate and maintain the remedy and continue to sample and monitor the contaminant plume.

FOR MORE INFORMATION

Environmental response activity issues:
Michigan Department of Environmental Quality
Mark DuCharme, Project Manager
269-567-3529; ducharmm@michigan.gov

Public health issues:
Michigan Department of Community Health
Christina Bush, Toxicologist
1-800-648-6942; bushcr@michigan.gov

Information Repository:
Saugatuck-Douglas District Library
137 Center Street, Douglas, MI
269-857-8241



LEGEND

EXCEEDANCE OF PART 201 GROUNDWATER CRITERIA

EARTH TECH

FIGURE C29

GROUNDWATER CONTAMINANT PLUME

TRICHLORDETHYLENE

VILLAGE OF DOUGLAS
DOUGLAS, MICHIGAN

AUGUST, 2003

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